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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/205,056	12/03/1998	JEAN-PIERRE DATH	F-722	9184

25264 7590 10/22/2003

FINA TECHNOLOGY INC
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EXAMINER

GRIFFIN, WALTER DEAN

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 10/22/2003

29

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/205,056

Applicant(s)

DATH ET AL.

Examiner

Walter D. Griffin

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

Art Unit: 1764

DETAILED ACTION

Response to Amendment

The rejections described in paper no.27, mailed on April 8, 2003, have been withdrawn in view of the amendment filed on August 4, 2003. Accordingly, the arguments concerning these rejections are moot and will not be addressed.

New rejections follow.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

Art Unit: 1764

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 15-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over EP 0109060 in view of Eberly, Jr. et al. (3,506,400).

Applicants are claiming a process for the production of propylene from an olefinic feedstock containing at least one olefin of C₄ or greater. The process comprises contacting an olefin feedstock with an MFI catalyst as defined in applicants' claim 15.

The reference of EP 0109060 discloses a process for the production of propylene from an olefinic feed containing 4 to 12 carbon atoms. See abstract, lines 1 and 2. EP 0109060 teaches that the olefinic feed is contacted with a ZSM-5 or silicalites. See page 1, lines 30 and 31. The ZSM-5 has a SiO₂/Al₂O₃ molar ratio of greater than or equal to 350. See page 1, lines 31 and 32. The reference teaches process conditions including a temperature of 400° to 600°C, a space velocity of 5 to 200 kg/hr, and a pressure of 1.5 to 7.5 atm. See page 1, lines 31-35 and page 2, lines 7 and 8.

The reference of EP 0109060 succeeds at disclosing a process for the production of propylene from an olefin feed in the presence of a catalyst with components corresponding to those claimed by applicants (i.e., ZSM-5 or silicalite type). The reference's disclosure of ZSM-5 and silicalite encompasses applicants' claimed MFI structure because such compositions possess MFI structure by definition.

It is noted that the EP reference does not disclose applicants' catalyst method of making limitations.

The Eberly reference discloses a process for treating a zeolite by steaming followed by contacting with a complexing agent. The treatment removes alumina from the gross structure of

Art Unit: 1764

the zeolite thereby increasing the silicon/aluminum ratio of the zeolite. The mechanism for this aluminum removal must be the same as claimed since the disclosed treating steps are the same as the claimed treating steps. The resulting zeolites may be used as catalysts. (See abstract; col. 2, lines 20-46; and col. 3, line 63 through col. 4, line 20.)

Since the EP reference does not restrict the mechanism by which the ZSM-5 (crystalline silicate) is produced, it would have been obvious to one having ordinary skill in the art at the time the invention was made to select steaming and complexing as a method to obtain the final silica/alumina ratio disclosed by the EP reference because Eberly illustrates that such steaming and complexing steps are known and conventional for producing desired silica/alumina ratios. The cited art supports the conclusion that applicants' catalyst modification steps are known and therefore not a patentable distinction over the teachings of the EP reference.

It is noted that the reference is silent about the relative percentages of propylene in the product effluent. However, applicants' claimed propylene percentage would naturally be produced because the same feed subjected to the same process conditions/catalyst would accomplish similar conversion percentage.

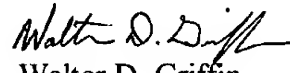
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter D. Griffin whose telephone number is 703-305-3774. The examiner can normally be reached on Monday-Friday 6:30 to 4:00 with alternate Fridays off.

Art Unit: 1764

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 703-308-6824. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.


Walter D. Griffin
Primary Examiner
Art Unit 1764

WG
October 7, 2003